

IN THE CLAIMS:

Please amend Claims 3, 5, 8, 11, 12, 14, 15, 18 and 22 to 25 as shown below. Please cancel Claims 1, 2, 13, 16, 17, 19 and 20 without prejudice or disclaimer of subject matter. The claims, as currently pending in the application, read as follows:

1. (Cancelled).

2. (Cancelled).

3. (Currently Amended) ~~The~~ A power converting apparatus according to claim 1, wherein having a non-insulated converter and a non-insulated inverter to convert direct current power inputted from a power supply to alternating current power, and to supply the alternating current power to a commercial power system which is grounded, said apparatus comprising:

a detector that detects for a ground fault of the power supply; and

a controller that controls potential to ground of various points on the power supply by varying an input voltage of the converter and/or an intermediate voltage between the converter and the inverter so that the potential to ground of each point on the power supply becomes a voltage for a detectable ground fault by said detector, while said detector detects for a ground fault, and when the ground fault is detected by said detector, said controller records information related to the ground fault in a memory.

4. (Original) The apparatus according to claim 3, wherein the information recorded in the memory includes at least the input voltage or intermediate voltage at the time of ground fault detection.

5. (Currently Amended) ~~The~~ A power converting apparatus according to claim 1, having a non-insulated converter and a non-insulated inverter to convert direct current power inputted from a power supply to alternating current power and to supply the alternating current power to a commercial power system which is grounded, said apparatus comprising:

a detector that detects for a ground fault of the power supply; and

a controller that controls potential to ground of various points on the power supply by varying an input voltage of the converter and/or an intermediate voltage between the converter and the inverter so that the potential of each point on the power supply becomes a voltage for a detectable ground fault by said detector, while said detector detects for a ground fault,

wherein said detector detects the ground fault at least at two detection levels, and when the ground fault is detected, said controller records information related to the ground fault in a memory for each detection level.

6. (Original) The apparatus according to claim 5, wherein the information recorded in the memory includes at least the input voltage or intermediate voltage at the time of ground fault detection.

7. (Original) The apparatus according to claim 5, wherein when the ground fault is detected, said controller predicts a ground fault position and/or a ground fault resistance value on the basis of the input voltage and intermediate voltage for each detection level and records a prediction result in the memory.

8. (Currently Amended) ~~The~~ A power converting apparatus according to claim 1, having a non-insulated converter and a non-insulated inverter to convert direct current power inputted from a power supply to alternating current power and to supply the alternating current power to a commercial power system which is grounded, said apparatus comprising:

a detector that detects for a ground fault of the power supply; and

a controller that controls potential to ground of various points on the power supply by varying an input voltage of the converter and/or an intermediate voltage between the converter and the inverter so that the potential to ground of each point on the power supply becomes a voltage for a detectable ground fault by said detector, while said detector detects for a ground fault,

wherein said detector detects the ground fault at least at two detection levels, and upon detecting the ground fault, outputs a ground current value, and when the ground fault is detected, said controller records information related to the ground fault in a memory for each detection level.

9. (Original) The apparatus according to claim 8, wherein the information recorded in the memory includes at least the input voltage, intermediate voltage, and ground current value at the time of ground fault detection.

10. (Original) The apparatus according to claim 8, wherein when the ground fault is detected, said controller calculates a ground fault position and/or a ground fault resistance value on the basis of the input voltage, intermediate voltage, and ground current value for each detection level and records a calculation result in the memory.

11. (Currently Amended) ~~The~~ A power converting apparatus according to claim 1, wherein said controller generates the varied having a non-insulated converter and a non-insulated inverter to convert direct current power inputted from a power supply to alternating current power and to supply the alternating current power to a commercial power system which is grounded, said apparatus comprising:

a detector that detects for a ground fault of the power supply; and

a controller that controls potential to ground of various points on the power supply within a predetermined time T1 by varying an input voltage of the converter and/or an intermediate voltage between the converter and the inverter so that the potential to ground of each point on the power supply becomes a voltage for a detectable ground fault by said detector, while said detector detects for a ground fault.

12. (Currently Amended) The apparatus according to claim 11, wherein after the ~~varied~~ potential to ground is ~~generated~~ controlled, said controller does not ~~generate a subsequent varied~~ control the potential to ground until a predetermined time T2 shorter than the predetermined time T1 has elapsed.

13. (Cancelled).

14. (Currently Amended) ~~The~~ A power converting apparatus according to claim 1; having a non-insulated converter and a non-insulated inverter to convert direct current power inputted from a power supply to alternating current power and to supply the alternating current power to a commercial power system which is grounded, said apparatus comprising:

a detector that detects for a ground fault of the power supply; and

a controller that controls potential to ground of various points on the power supply by varying an input voltage of the converter and/or an intermediate voltage between the converter and the inverter so that the potential to ground of each point on the power supply becomes a voltage for a detectable ground fault by said detector, while said detector detects for a ground fault,

wherein when the ground fault is detected, said controller stops power supply to the commercial power system, resumes power supply after a predetermined time, and ~~generates a subsequent varied~~ controls the potential to ground to confirm whether a ground fault is detected once or a plurality of number of times.

15. (Currently Amended) ~~The~~ A power converting apparatus according to claim 1, having a non-insulated converter and a non-insulated inverter to convert direct current power inputted from a power supply to alternating current power and to supply the alternating current power to a commercial power system which is grounded, said apparatus comprising:

a detector that detects for a ground fault of the power supply; and

a controller that controls potential to ground of various points on the power supply by varying an input voltage of the converter and/or an intermediate voltage between the converter and the inverter so that the potential to ground of each point on the power supply becomes a voltage for a detectable ground fault by said detector, while said detector detects for a ground fault,

wherein said power supply comprises a plurality of direct current power supply units connected in series.

16. (Cancelled).

17. (Cancelled).

18. (Currently Amended) ~~The apparatus according to claim 17, A solar power generation apparatus comprising:~~

a power supply, which supplies direct current power; and

a power converting apparatus, which comprises a non-insulated converter and a non-insulated inverter to convert direct current power inputted from said power supply to alternating current power, wherein the alternating current power is supplied to a commercial power system which is grounded, said power converting apparatus further comprising:

a detector that detects for a ground fault of said power supply; and

a controller that controls potential to ground of various points on the power supply by varying an input voltage of the converter and/or an intermediate voltage between the converter and the inverter so that the potential to ground of each point on the power supply becomes a voltage for a detectable ground fault by said detector, while said detector detects for a ground fault,

wherein said power supply comprises a plurality of direct current power supply units connected in series.

19. to 21. (Cancelled).

22. (Currently Amended) ~~The apparatus according to claim 17;~~
~~wherein said controller generates the varied~~ A solar power generation apparatus
comprising:

a power supply, which supplies direct current power; and

a power converting apparatus, which comprises a non-insulated converter and a non-insulated inverter to convert direct current power inputted from said power

supply to alternating current power, wherein the alternating current power is supplied to a commercial power system which is grounded, and wherein said power converting apparatus further comprises:

a detector that detects for a ground fault of said power supply; and

a controller that controls potential to ground of various points on the power supply within a predetermined time T1 by varying an input voltage of the converter and/or an intermediate voltage between the converter and the inverter so that the potential to ground of each point on the power supply becomes a voltage for a detectable ground fault by said detector, while said detector detects for a ground fault.

23. (Currently Amended) The apparatus according to claim 22, wherein after the varied potential to ground is ~~generated~~ controlled, said controller does not ~~generate a subsequent varied~~ control the potential to ground until a predetermined time T2 shorter than the predetermined time T1 has elapsed.

24. (Currently Amended) ~~The A control method according to claim 20, wherein the varied~~ of a power converting apparatus which comprises a non-insulated converter and a non-insulated inverter to convert direct current power inputted from a power supply to alternating current power, wherein the alternating current power is supplied to a commercial power system which is grounded, said method comprising the steps of:

detecting a ground fault of the power supply; and

controlling potential to ground is generated of various points on the power supply within a predetermined time T1 by varying an input voltage of the converter and/or an intermediate voltage between the converter and the inverter so that the potential to ground of each point on the power supply becomes a voltage for a detectable ground fault in the detecting step, while a ground fault is detected.

25. (Currently Amended) The method according to claim 24, wherein after the ~~varied~~ potential to ground is ~~generated~~, a subsequent ~~varied~~ controlled, the potential to ground is not ~~generated~~ controlled until a predetermined time T2 shorter than the predetermined time T1 has elapsed.